Impact of knowledge sharing, learning adaptability and organizational commitment on absorptive capacity in pharmaceutical firms based in Pakistan

Introduction

Knowledge is considered the most important component of any organization, irrespective of the type of organization, their knowledge structures, the type of Processes and the type of the products they are producing (Nonaka, 1994). In the view point of resource based theory, knowledge is created inside the boundaries of the organization; therefore, Organizations focus on the value of their knowledge created by them inside their boundaries. They make it unique so that they are able to make their products significantly different from their competitors. Further, they apply their knowledge which they have created by them in such a manner that it becomes difficult for their competitors to copy it for their processes. In this way they make their knowledge a non-substitutable component of their organizations (Grant, 1991; Hitt et al, 2016; Nonaka,1991)

However, in this turbulent environment it is not possible for any organization to create all the required knowledge inside their boundaries; therefore, most of the organizations upgrade their knowledge base by getting the required knowledge form outside their boundaries from different sources instead of generating all the knowledge inside (Grant, 1996; Teece et al, 1996; Cohen and Levinthal, 1990). The organizations require specific capabilities to acquire and absorb new knowledge coming from outside their boundaries and this capability is called absorptive capacity. Now-a-days instead of focusing on the single source of knowledge through their limited internal capacity to generate all the required knowledge, the organizations focus on enhancement of absorptive capacity (Cohen and Levinthal, 1990; Minbaeva et al, 2014). The construct "absorptive capacity" (ACAP) was introduced by Cohen and Levinthal (1990) and is defined as the ability of an organization to acquire new knowledge from outside the boundaries, its assimilation and application in its processes.

Past research has argued ACAP based on assumption of utopian priori of employees' behavior since its inception (Cohen and Levinthal,1990) in context to the intra

organization contexts either in the form of dynamic capabilities (Zahra and George,2002) or competitive advantage (Lane et al, 2006), development of ACAP in relative terms (Lane and Lubatkin, 1998) till date covering the fields of innovation (Lau and Lo ,2015; Tiegland et al,2014),Information technology (Robert et al,2012) etc across the organizational boundaries.

There is an extensive literature in studies relating to ACAP but either this construct has been explored in the organizational perspective at macro level or related to the independent constructs such as innovation perspective (Bongsun et al, 2016; Lin et al, 2012; Pattinson and Preece,2014), inter firm knowledge transfer (Krylova et al, 2016), decision making at organizational level (Wang and Byrd, 2017) and there are few studies highlighting the micro mechanisms related to employees which leaves a gap that needs to be addressed in intra-organization perspective (Minbaeva et al, 2014; Schildt et al, 2012)

Despite the declaration of employees as key actors of ACAP (Cohen and Levinthal, 1990) and playing vital role in knowledge process activities (Nonaka, 1994, Argot et al,2003), the extant literature seems devoid in studies about knowledge behaviors of individuals in building ACAP in its repository. To the best of our knowledge there is hardly any literature which refers to the studies explicitly focusing on employees as highlighted by many studies in a historical path of Absorptive Capacity (Minbaeva et al, 2014; Volberada et al, 2010).

This paper, therefore, contribute to the existing body of knowledge of ACAP by analyzing the effects of knowledge Sharing (KS), Learning Adaptability (ADAPT) and Organizational Commitment (OC) on Absorptive Capacity (ACAP) and in the light of our following research question:

"How do Knowledge sharing (KS), Learning Adaptability (ADAPT) and Organizational Commitment (OC) contribute to develop Absorptive Capacity in pharmaceutical companies based in Pakistan?"

Aims and Objectives

This study aims to achieve following objectives:

- To ascertain the impact of Knowledge sharing (KS) on Absorptive Capacity (ACAP) in pharmaceutical companies based in Pakistan?
- To ascertain the impact Learning Adaptability (ADAPT) on Absorptive Capacity (ACAP) in pharmaceutical companies based in Pakistan?
- To ascertain the impact Organizational Commitment (OC) on Absorptive Capacity (ACAP) in pharmaceutical companies based in Pakistan?

Absorptive Capacity (ACAP)

The construct "Absorptive Capacity" was first introduced by Cohen and Levinthal (1990) to label the capabilities of the firm to innovate and, thus, to be dynamic. The recognition, assimilation and exploitation of external knowledge were the focus of their study. They suggested that the prior related knowledge is history or path dependent. Zahra and George (2002) further gave a new direction to the definition of the absorptive capacity; they proposed this dynamic capability as an outcome of organizational routine and processes. They proposed the four components of absorptive capacity placed in two interlinked sub groups. Acquisition (ACQ) and Assimilation (ASM) named as Potential Absorptive Capacity and Transformation (TFMN) and Exploitation (EXPL) named as Realized Absorptive Capacity. The results of empirical study of Jansen et al (2005) proved four distinct factors model of Absorptive Capacity(ACAP) consisting on Acquisition(ACQ),Assimilation(ASM),Transformation(TFMN), and Exploitation(EXPL) superior to the two factor model as suggested by Zahra and George (2002). The absorptive capacity of the organization builds on the absorptive capacities of the individuals (Cohen and Levinthal, 1990).

As pointed out by Cohen and Levinthal (1990) the acquisition of the external knowledge not only depends upon the mere exposure to the external environment but it

also depends upon the organization's internal structures and communication network. They further suggested the important role of gatekeepers for flow of information. They not only act as mentors but also transmit information. The absorptive capacity spans from individuals and extends to the national level and all the levels are meshed with each other (Cohen and Levinthal, 1990). As pointed out by Zahra and George (2002) that is in spite of having strong skills, the organizations may not be able to translate these skills into innovation because of lack of assimilation and transformation of knowledge. There is no direct measure of the absorptive capacity (Zahra and George, 2002) therefore this construct is still in the development phase and need to be operationalized further. The ACAP has been viewed in different roles with different constructs such as 'Moderator' (Rothaermel and Alexandre, 2009, Winkelbach and Walter, 2015,), 'Mediator' (Leal-Rodríguez et al., 2014), and as direct antecedent in improving the business processes and innovations (Spithoven et al., 2011) thus enhancing organizational performance (Chang et al., 2012). However, there still exists a gap in absorptive capacity research, to explore its applicability to macro-level and micro-level mechanisms, such as that found in human resources (Minbaeva et al., 2003, Minbaeva et al., 2014). After two decades, this construct has been researched at different levels (micro and macro levels) inside the organization (Minbaeva et al., 2014). The antecedents pertaining to Absorptive Capacity need to be explored to develop effective knowledge structures.

Knowledge Sharing

In the environment of any organization, the importance of knowledge sharing has become necessary. According to Yang (2015), willingness and attitude is the key factor for the knowledge sharing practices. Incentive is another important factor for knowledge sharing. Although there is a significant knowledge in regard to the knowledge management but there is no significantly accepted definition of the knowledge sharing aspects and

knowledge management in the research. Nonaka (1991) broadly defines knowledge management as a processing of information obtained from different sources and diffusion of information refers to knowledge sharing. Bock & Kim (2002) argue knowledge sharing is the most important component of knowledge management. Similarly, Inkpen (2000) asserts that the knowledge will have a minimum impact on organization till the time it is not shared throughout the organization. Lin (2008) describes the knowledge sharing practices as the exchange of knowledge and further suggests theory, methodology and sharing as three different and important aspects of knowledge sharing. Lin (2008) suggests that organizational structure characteristics, organizational culture, and organizational interaction have strong motivational power for knowledge sharing along with incentives.

Learning Adaptability

Although adaptability is not a new concept, but due to the continuous technological growth, the construct is being developed to understand the new insight by research sponsors, academic researchers, and practitioners in organizations. Many jobs require work diversities and work in collaboration with other individuals (Noe & Ford, 1992) to adopt this turbulent environment effectively. In research the concept has been discussed in different contexts. Generally, adaptive performance, role flexibility and proficiency of self management in learning are main focus in research. Hartline & Ferrell (1996) define employees' adaptability as "*the ability of contact employees to adjust their behavior to interpersonal demands of the service counter*". We infer that adaptability or learning adaptability is an important factor of individual capabilities. Paulsson et al. (2005) points out the adaptability as an important factor for the employees' capabilities. In this study we focus on the individual adaptability and to be more precise learning adaptability of the employees.

Organizational Commitment (OC)

The construct organizational commitment gained popularity in different contexts and different set ups. The insights of the construct has been tested in different studies in the organizations i.e., public, private and not for profit organizations. The research focused on attitudes and behaviors in this perspective. Extensive studies have been conducted in

the past thirty years in the construct of organizational commitment with different antecedents and outcomes (Angle and Perry, 1981). Nierhoff et al (1990) found a strong correlation between the degree of commitment of the employees and the overall management culture and decisions taken by the top managers. These correlations in their study reveal the impact of commitment of employees on the decision making and overall environment of the organization.

The construct has been defined in different ways in different contexts and environment in the organizations. Meyer and Allen (1991) divided the organizational commitment into three categories on the basis of the behaviors of employees at their work environment. They divided organizational commitment into affective, continuance and normative commitment categories. Normative commitment is the new aspect of the organizational commitment which does not have a detailed research. Meyer & Allen (1997) began to examine normative commitment in the form of the psychological contract between employee and the organization. Psychological contracts are the beliefs of exchange between the employee and the organization which influences the obligations to the organization (Meyer & Allen, 1997).

Establishment of Hypotheses

The knowledge sharing has been argued as an important component for the development of ACAP as the new knowledge needs to be absorbed by the employees (Nonaka,1994). The enhancement of ACAP (knowledge creation) within the organization and its assimilation is fostered through knowledge sharing among different employees and departments as knowledge donors and recipients (Cohen and Levinthal, 1990). Knowledge remains stagnant and does not expand till the time it is not shared among employees. The employees always seek new techniques and procedures to perform their task which is beneficial for them as well as for the organization and both attribute to develop ACAP, therefore, it is argued that knowledge sharing creates positive impact on organization (Inkpen, 2000). Irrespective of the type of organization the ACAP is developed through a systematic pattern with key focus on knowledge process activities and knowledge sharing (Nonaka, 1994) as it is hard to articulate if not shared (Minbaeva et al, 2014). The activities in pharmaceutical companies for the development of product

are interdependent and thus need inputs from different sources and in such environment, knowledge sharing is considered the most important component for knowledge process activities (Argote et al,2003; Bock & kim,2002; Lin,2008) for the development of ACAP. Thus our hupothesis1 becomes: Knowledge Sharing positively impacts Absorptive Capacity in pharmaceutical companies of Pakistan.

In this turbulent environment, fast changes are observed in the processes and knowledge activities as the customers' requirements are changing rapidly. In this situation, the adaption of new ways to cope these changes and knowledge activities is very important (Paulsson, 2005) for effective performance of the firms. The adaptability to these changes is the key to develop Absorptive Capacity as argued in the original study conducted by Cohen and Levinthal (1990). They defined these patterns in the form of learning process by the employees in which they learn new techniques based on their previous knowledge and adding values to them by adapting new requirements. The interaction patterns for generation of new knowledge or absorbing new knowledge (ACAP) are strongly dependent on the learning adaptabilities of employees as they encounter both type of knowledge (tacit and explicit). The learning adaptabilities make them switch to different interaction patterns as knowledge process for creation of new knowledge is complex phenomenon. The pharmaceutical companies being knowledge intensive in nature, are prone to new knowledge extensively, it is therefore, believed that learning adaptability contributes for the development of ACAP. Thus, our hypothesis2 becomes: Learning Adaptability positively impacts Absorptive Capacity in pharmaceutical companies of Pakistan.

Knowledge processes are not simple sequential activities but consist of complex network and are dependent on employees and therefore, their attitudes are important aspects to be considered while processing knowledge. Organizational commitment is considered to have direct effect on these knowledge activities (Hislop, 2003). They argue that knowledge of the organization especially tacit in nature is transmitted in case the employees are committed to their organizations. Storey and Quintas (2001) proposed that organizational commitment in relation to trust and motivation as one important factor in knowledge processing in the organizations. Employees with high levels of organizational commitment leads to less turn over and willing to provide extra discretionary effort and

in turn better perform to transform knowledge. Thompson and Heron (2005) argued that high organizational commitment is critical to knowledge creation; we infer that the external knowledge may be processed by the employees with high organizational commitment level. They claim that motivation and commitment perform an important role in successfully implementing knowledge processes. They further argue that the transformation of external knowledge is dependent on active participation of employees. Nonaka (1991) argues that employee commitment is crucial for knowledge creation of the organization. Cohen and Levinthal (1990), argue that mere exposure of the organization or individuals to the external knowledge does not make any difference to organization. The commitment of employees with the organization in absorbing the new knowledge (ACAP) is equally important. Pharmaceutical companies of Pakistan have fast knowledge inflows and require their employees to process this new knowledge which may be effectively executed with high organizational commitment. Thus, our hypothesis 3 becomes as: Organizational Commitment positively impacts Absorptive Capacity in pharmaceutical companies of Pakistan. Figure 1 shows the research model of our study.

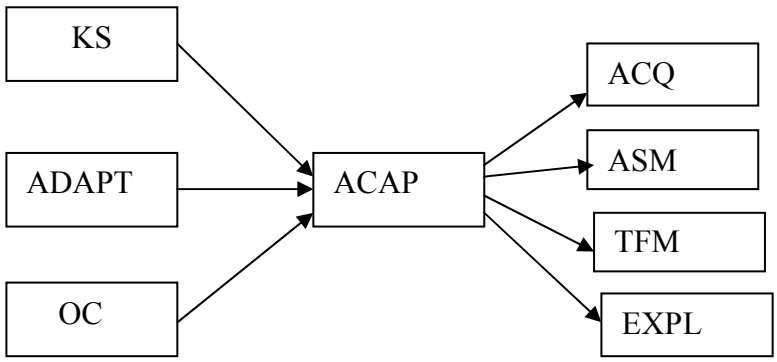

Figure 1: Research Model

Research Methodology

This study was conducted at the pharmaceutical firms of Pakistan. The Pharmaceutical companies of Pakistan have uniform knowledge structures and the companies induct the employees based on uniform criteria (qualification, age, background experience and

specialties in specific fields). Moreover, the strength of female employees is less as compared to males in the entire pharmaceutical companies in Pakistan. The multinational pharmaceutical companies, the companies having joint ventures and newly established companies were not included in this study. Rest of the companies had a uniform working environment. The data was collected from 30 pharmaceutical companies for pilot study through purposive sampling for validation of instruments and under study variables. For main study list of 80 pharmaceutical companies of Islamabad and Lahore zones of Pakistan was generated falling in our sample criteria. The data was collected through simple random sampling with uniform demographic distribution. The standard instruments with high reliability ($\alpha > .7$) of all the variables were adapted from existing studies in literature. The instrument related ACAP were adapted from the Jansen et al (2005), the instruments related to KS and ADAPT was adapted from Almahamid et al (2010) and instrument related to OC was adapted from Meyer et al (1993). The items of instruments were discussed with the experts of knowledge management domain for content validity. For further validation of instruments, the data was collected from 30 pharmaceutical companies (not part of this study) as a pilot study. The unit of analysis was the middle managers of pharmaceutical companies with the demographics, the gender and age groups. The rationale of the unit of analysis is that the maximum information is handled / accessed by the middle managers in Pakistan perspective. The data was collected on five point Likert scales rating from strongly agree to strongly disagree.

Personal visits to the respondents were made to get most of the questionnaires filled. 170 questioners were distributed and 120 were returned making 70 percent response rate. The responded questionnaires were further evaluated and 102 were selected for the conduct of analysis of this study. Out of selected questionnaires, 66.7 percent of the respondents were male and 35.3 were female respondents showing the male dominant occupation of manufacturing set up of Pakistan. In this study, 43.1 percent of the respondents were in the age group of 26-30 years and 20.6 percent fell in 31-35 years age groups. Both age groups together made dominant (63.7) percentage of age groups under study (Table 1&2).

Table 1

GEN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	**66**	**64.7**	**64.7**	**64.7**
	FEMALE	**36**	**35.3**	**35.3**	**100.0**
	Total	**102**	**100.0**	**100.0**	

Table 2

AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
AGE	26-30	**44**	**43.1**	**43.1**	**43.1**
	31-35	**21**	**20.6**	**20.6**	**63.7**
	36-40	**15**	**14.7**	**14.7**	**78.4**
	41-45	**11**	**10.8**	**10.8**	**89.2**
	ABOVE 45	**11**	**10.8**	**10.8**	**100.0**
	Total	**102**	**100.0**	**100.0**	

The data was analyzed by using different statistical tools through SPSS software. The mean response against different dimensions was calculated. The graphs were plotted against different gender and age groups. The correlations using correlation matrix were obtained followed by the regression analysis. The results obtained from different statistical tests were analyzed and interpreted.

Results

Descriptive statistics and correlations

(Tables 3-4)

The mean response of all the variables was observed greater than 3 which shows the positive concern of the respondents towards the measurement of latent variables understudy. The highest mean response (3.9) with standard deviation (.67) was observed

against OC and the lowest response (3.1) with standard deviation (.92) was observed against ACQ. Rest all mean responses ranged from 3.50-3.89. The mean response of ACQ was observed as lowest (2.8-3.0) in all age groups and highest (3.75-3.95) in EXPL. The mean responses of males and females against ACQ were 3.01 and 3.12 respectively. The mean response against EXPL of males and females were 3.87 and 3.76 respectively.

Table 3

Descriptive Statistics

	N	Mean		Std. Deviation	Variance
	Statistic	Statistic	Std. Error	Statistic	Statistic
ACAP	**102**	**3.6276**	**.05425**	**.54795**	**.300**
ACQ	**102**	**3.1078**	**.09100**	**.91907**	**.845**
ASM	**102**	**3.5049**	**.07356**	**.74294**	**.552**
TFMN	**102**	**3.5471**	**.07093**	**.71639**	**.513**
EXPL	**102**	**3.8309**	**.05387**	**.54405**	**.296**
KS	**102**	**3.6821**	**.05751**	**.58087**	**.337**
ADAPT	**102**	**3.8878**	**.05285**	**.53379**	**.285**
OC	**102**	**3.9020**	**.06614**	**.66794**	**.446**
N	**102**				

The mean responses of KS (3.60), ADAPT (3.85) and OC (3.83) of males were lower than the mean responses of KS (3.82), ADAPT (3.96) and OC (4.03) of females. The mean response against OC was highest (3.99) in age group of 45 and above and lowest (3.75) in age group (31-35). The mean responses of KS and ADAPT were observed above 3.5 with slight differences in different age groups. The correlation between KS and ACQ was found no significant(r =.180), whereas correlation with ASM (r =.644) and EXPL (r =.552) was found moderately strong. Strong correlation was found between KS and TFMN(r =.687). The correlation between ADAPT and ACQ was non-significant (r =.091), with ASM it was found moderate (.544) and moderately strong with TFMN(r =.603) and strong positive correlation with EXPL(r =.677).

The correlation between OC and ACQ was found non significant negative(r =-.077), moderate relation with ASM(r =.441) and strong positive correlations with TFMN(r =.567) and EXPL (.657). Strong positive correlations of overall ACAP was found with KS(r =.773) and ADAPT(r =.733) and OC (r =.664) were observed.

Table 4

Correlations

		ACAP	ACQ	ASM	TFMN	EXPL	KS	ADAPT	OC
ACAP	Pearson Correlation	1							
	Sig. (2-tailed)								
	N	102							
ACQ	Pearson Correlation	.203*	1						
	Sig. (2-tailed)	.040							
	N	102	102						
ASM	Pearson Correlation	.874**	.177	1					
	Sig. (1-tailed)	.000	.075						
	N	102	102	102					
TFMN	Pearson Correlation	.821**	.242*	.560**	1				
	Sig. (1-tailed)	.000	.014	.000					
	N	102	102	102	102				
EXPL	Pearson Correlation	.747**	.054	.538**	.397**	1			
	Sig. (1-tailed)	.000	.589	.000	.000				
	N	102	102	102	102	102			
KS	Pearson Correlation	.773**	.180	.644**	.687**	.552**	1		
	Sig. (1-tailed)	.000	.070	.000	.000	.000			
	N	102	102	102	102	102	102		
ADAPT	Pearson Correlation	.733**	.091	.544**	.603**	.677**	.681**	1	
	Sig. (1-tailed)	.000	.363	.000	.000	.000	.000		
	N	102	102	102	102	102	102	102	
OC	Pearson Correlation	.664**	-.077	.441**	.567**	.657**	.685**	.740**	1
	Sig. (1-tailed)	.000	.004	.000	.000	.000	.000	.000	
	N	102	102	102	102	102	102	102	102

*. Correlation is significant at the 0.05 level (1-tailed).

**. Correlation is significant at the 0.01 level (1-tailed).

Multiple Regression analysis and Testing of hypotheses

(Tables 5&6)

The multiple regression analysis was conducted to see the contribution of variance caused by the independent variables to the dependent variable (ACAP). The multiple regression result shows that 67percent (Adjusted R square = .670) of the variation in dependent variable (ACAP) has been explained by independent variables knowledge sharing (KS), adaptability (ADAPT) and

Table 5

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	**.824[a]**	**.680**	**.670**	**.31485**	**1.770**

a. Predictors: (Constant), OC, KS, ADAPT

b. Dependent Variable: ACAP

Table 6

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	**.317**	**.238**		**1.333**	**.186**
	KS	**.459**	**.079**	**.487**	**5.793**	**.000**
	ADAPT	**.356**	**.093**	**.347**	**3.811**	**.000**
	OC	**.061**	**.075**	**.074**	**.811**	**.004**

a. Dependent Variable: ACAP

b. Multiple regression analysis

Organizational Commitment (OC), together. The remaining unexplained 33 percent of the variation in the dependent variable (ACAP) has been caused by the unknown variables not included in this model. Durbin-Watson test for independent errors was also observed within range. This test statistic of independent errors ranges from 0 to 4. The values below 1 and above 3 are problematic and are a cause of concern.

The hypothesis testing was carried out by regressing all the three variables KS, ADAPT and OC on ACAP. The significant and strong contribution of the KS in explaining the ACAP (b = .459, at t = 5.79 and p <.001) thus Hypothesis1 was supported. The individual contribution of ADAPT in explaining the ACAP was also observed significant (b = .356, at t = 3.8 and p <.001). This supported hypothesis 2 of our study. However, the contribution of OC in explaining ACAP was observed significant but this contribution was very weak (b = .061, at t = .81 and p <.05), thus our hypothesis 3 was partially supported.

Discussion

Absorptive Capacity has been explored and developed in context to strategic variables such as innovation, international joint ventures and R & D activities etc. and very less emphasis has been made in context to intra organization variables. In this study, we have identified the human behaviors (KS, ADAPT and OC) related to knowledge processes for the development of Absorptive Capacity in context to pharmaceutical companies of Pakistan. The relationship of these variables was explored with Absorptive Capacity in the light of hypotheses established through literature. The results of our empirical study showed that KS has positive impact on ACAP. This means that knowledge sharing is a pre-requisite of the ACAP process and sharing of the knowledge among the employees within organization triggers this process. The results is aligned with the pioneer study of ACAP conducted by Cohen and Levinthal (1990), Nonaka (1994) and Minbaeva et al (2014) who argue that knowledge flows from donors to the recipients effectively if it is shared in each step. The exchange of knowledge for the development of ACAP has also been argued an important component in the organizations. The employees possess knowledge which they obtain from different sources and sharing of which results into raising of Absorptive Capacity of organization in the form of employees and documented procedures for future use.

Results also showed ADAPT as a positive contributor in the development of ACAP which further shows that consistent follow up of the new knowledge and its assimilation in routine activities leads them to raise ACAP of their organization. The new knowledge may not always be coherent with the existing knowledge structures especially in pharmaceutical companies those acquire knowledge in routine. Moreover, the fast changing technologies demand the employees to learn new processes accordingly. The results of this study are

consistent with those of Lenox and King (2004). In pharmaceutical companies the inflow of knowledge is very fast and timely addressing this change is very important for them. They may establish formal forums and create opportunities for their employees to upgrade their knowledge to enhance ACAP.

The results of our study showed weak impact of OC on ACAP which means that development of ACAP may be studied in different contexts and roles of OC such as indirect effects (moderator and mediators or both). Though studies highlight the importance of OC in knowledge process activities (Neyestani et al, 2013; Meyer & Allen,1997) but this concept still needs to be explored in context to ACAP. OC seems to be complex while implementing in the knowledge process activities as knowledge management itself is a developing filed, moreover the outcomes of different studies may be context specific which means that the results of OC may vary form organization to organization.

Overall, the results of our study show that micro-level variables in general and KS, ADAPT and OC in particular may be emphasized for the development of ACAP. This may also be inferred that technological aspects, infrastructure and strategic variables such as joint ventures may be important for enhancement of ACAP, however, the importance of intra-organizational variables cannot be ruled out.

Contribution of this study

This study contributes to the body of knowledge in two ways. First it contributes in exploring insights of Absorptive Capacity to individual levels. As suggested by Cohen and Levinthal (1990) in their original model human behavior as fundamental units for enhancing Absorptive Capacity. This is also supported in HR practices where human capital is considered as the most important source for any activity in organization. Despite this a few studies were found which considered human behavior aspects at grass root level. Since two decades knowledge management domain has been discussed with special attention on hard aspects. This study has highlighted the importance of antecedents related to employee's behaviors. This study gives new direction to theoretical insights for future work on Absorptive Capacity. Secondly, the study gives healthy input to practitioners in the knowledge intensive environment of pharmaceutical companies and decision making in day to day routines. Significant results to develop Absorptive

Capacity indicate that managers while considering hard aspects such as technologies for knowledge base should also consider the technology handlers. Balance between two aspects is necessary.

Conclusion and Recommendations

Although emerging concept of Absorptive Capacity has been studied in different perspectives starting from defining the basic concepts to the formulation of strategies for organizations based on Absorptive Capacity, the key human behavior related to KS, ADAPT and OC have been ignored in the literature of absorptive capacity studies despite giving their prime importance in original study of Absorptive Capacity by Cohen and Levinthal (1990). In this study we have incorporated these human behaviors critical to enhance Absorptive Capacity. We have developed relationships of human behavior with Absorptive Capacity based on the studies conducted by Foss et al (2010) and Minbaeva et al (2014). The results of our study highlight that this emerging construct should be studied in context to intra organization factors directly related to employees for development of Absorptive Capacity in organizations. As expected, the results showed the significant contribution of employees' behaviors in explaining Absorptive Capacity in knowledge intensive companies. The results showed direct significant relationships of employees' behaviors with Absorptive Capacity. The findings of this study suggest that in knowledge intensive environment, decision makers should have special consideration for employees' behaviors towards processing knowledge activities for development of absorptive capacity. The employees' commitment to their organizations does not support to have significant direct contribution for the development of absorptive capacity, however, this may be explored its indirect contribution in context to different variables.

Limitations of study

This study focused on the data from the middle managers of the pharmaceutical firms only. The results may not be generalized to the sectors. Another limitation is that the respondents of study were middle managers. Although it was made intentionally to see

the impact of management aspects other than organizational mechanisms as discussed by Cohen and Levinthal (1990) and Jansen et al (2005) in their studies. The results on the basis of the data collected from other entities of the organization may differ. This is a cross sectional study and longitudinal study may give different results.

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